Summary Report on Exploring APEC's Path Towards Empowering Sustainable Green Growth

APEC Economic Committee

August 2026

Asia-Pacific
Economic Cooperation

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Background of the workshop

As part of Singapore's APEC Economic Committee Project EC_203_204A, titled "Exploring APEC's Path Towards Empowering Sustained economic growth", a 3-day in-person workshop was held from 22 to 24 September 2025. The workshop was built upon the findings of a background study that mapped the regional landscape to identify environments that effectively facilitate sustained economic growth. Over three days, participating delegates from APEC economies were introduced to a diverse range of approaches and innovative solutions to sustained economic growth. The workshop consisted of presentations sharing public and private strategies in promoting sustained economic growth, interactive discussions on how challenges or obstacles to sustained economic growth could be tackled, and site visits to provide insights into real-world applications of sustained economic growth solutions. A detailed outline of the administrative programme can be found in **Annex A**.

Participants comprised mainly of officials responsible for designing and implementing sustained economic growth programmes. Presenters from both the private and public sector shared valuable insights on embedding sustainability, in practice, in structural reform policies, institutional frameworks, and business operations.

This report provides an overview of the workshop proceedings, summarises the best practices and case studies shared across the three days, and highlights key insights discussed in each session.

1. Executive summary

Across the three days, several key themes and takeaways emerged, reflecting shared opportunities and challenges faced by APEC economies in driving sustained economic growth.

At the public policy level:

1. Policy coherence and long-term frameworks:
    - Participants and speakers highlighted the importance of developing **system-wide strategies and sectoral roadmaps** that are aligned with regional and global goals, adapting to local realities. Crucially, **sustainability should be framed as a competitive advantage and a growth opportunity**, actively designing policies where economic development is pursued alongside environmental stewardship, rather than viewed as a trade-off.
    - Discussions also emphasised that **global cooperation mechanisms** are essential for harmonising standards and scaling impact across borders. Both internal and regional coherence is necessary for sustained economic growth. Additionally, inclusive **policy design** ensures that these strategies are responsive to the needs and characteristics of the economy by balancing economy-wide guidance with sector-specific flexibility.
2. Capacity building and skills development
    - A key takeaway from the workshop was that **workforce upskilling and reskilling**, alongside strengthening the institutional capacity, remain central to bridging capability gaps required to implement complex policies across key sectors. Building institutional capacity supports the transition to new practices, ensuring that industry actors have the technical expertise and operational knowledge to design, implement and innovate sustainability initiatives.
3. Mobilising finance for technology adoption and innovation
    - Participants noted the growing importance of **innovative transition finance tools and investment** through tiered structures tailored to different company sizes and needs to support the economic transition and ensure that no one is left behind. A common challenge discussed was the need for **targeted interventions to support new technologies in reaching price parity**, thereby reducing market failures, and accelerating the adoption of innovative solutions either by providing subsidies or helping to absorb the premium.

At the private level:

4. Stakeholder and consumer engagement

- Discussions underscored that broad-based adoption of new practices, accountability and transparency, relies heavily on **systematic engagement across the entire value chain**. This extensive engagement encompasses suppliers, consumers, and civil society organisations, and is vital for driving critical shifts toward high-volume sustainable solutions.

For Public-Private Partnerships (PPPs):

5. Collaboration to address market failures
    - A recurring theme was the role of PPPs in addressing systemic domestic gaps – such as the lack of jobs and upskilling in emerging sectors, limited incentives for sustainable transformation, and siloed operations in the sustainability ecosystem. Participants observed that PPPs can play a pivotal role in **co-developing and deploying shared public goods** such as emission factor registries and accessible knowledge platforms.
6. Regional and cross-sectoral cooperation:
    - PPPs are key to fostering **regional and cross-sectoral cooperation**. This involves cultivating partnerships among governments, businesses, and local communities to implement scalable solutions, harmonise standards, and effectively mobilise the necessary investment required for ambitious regional sustained economic growth initiatives.

These findings mirror the key findings of the background report, which highlighted key policy actions for sustained economic growth:

1. The mobilisation of finance;
2. Policy alignment, coherence, and certainty; and
3. Knowledge-sharing and capacity-building.

2. Summary of discussions

2.1 Opening remarks

The workshop commenced with welcome remarks by Alice McKenzie, APEC Economic Committee Programme Director who highlighted the pressing need for green structural reforms, referencing the 2024 APEC Economic Policy Report (AEPR)[1] and the Enhanced APEC Agenda for Structural Reform (EAASR)[2], which is built upon four priorities:

1. Creating an enabling environment for competitive markets;
2. Building market resilience against shocks;
3. Promoting sustained economic growth for all sectors; and
4. Harnessing innovation and skills development for digitalisation

Christopher Tan, Deputy Director, Ministry of Trade and Industry, and Chair of the APEC Committee of Trade and Investment, followed with opening remarks on government approaches to creating an enabling environment for sustainability objectives. He underscored the importance of PPPs as a cornerstone for achieving sustainability.

2.2 Overview of the pre-workshop background study

A summary of the pre-workshop background study was presented to participants, distilling the key findings of the report. The report aims to identify the policy environments that best facilitate sustained economic growth, allowing APEC economies to learn from best practices currently being implemented across the region, identify remaining gaps, and understand opportunities for future collaboration. Drawing on quantitative and qualitative interviews with policymakers and experts across the APEC region, the report highlighted several common challenges, including insufficient funding, technological and infrastructural limitations, economic and social trade-offs, issues of stakeholder engagement and public opinion, and the pressures of geopolitical fragmentation.

Best practice case studies from Australia; Canada; Republic of Korea; Peru; and Singapore further elucidated three common pathways for APEC collaboration:

1. Strengthening capacity-building and knowledge exchange;
2. Leveraging finance and technology; and
3. Improving policy design access by aligning strategies across government, industry, civil society, and Indigenous communities through embedding

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[1] APEC, *2024 APEC Economic Policy Report: Structural Reform and Financial Inclusion*. Explores comprehensive structural reforms for widening access to financial services.

[2] APEC, Enhanced APEC Agenda for Structural Reform Mid-Term Review Report. Offers direction for structural reforms that support inclusivity, sustainability, and innovation.

transition principles for all into policy frameworks and balancing economy-wide guidance with sector-specific flexibility.

Following the presentation, participants were polled on the most significant environmental challenges facing their economies (*Figure 1*) and what they perceived to be the biggest economic opportunities in relation to sustained economic growth (*Figure 2*). Climate resilience emerged as the most pressing concern, highlighting the region's vulnerability to extreme weather conditions and climate shifts, followed closely by fossil fuel dependence and waste management. Structural dependencies on fossil fuels and persistent waste management will continue to hinder the transition to sustained economic growth, requiring effective pathways for collaboration that address clean energy and circular economy solutions in a complementary manner. A strong emphasis on energy security along with developing innovative infrastructure highlights the potential of these sectors in driving sustained economic growth, attracting investment, and creating resilient, future-ready economies across the APEC region.

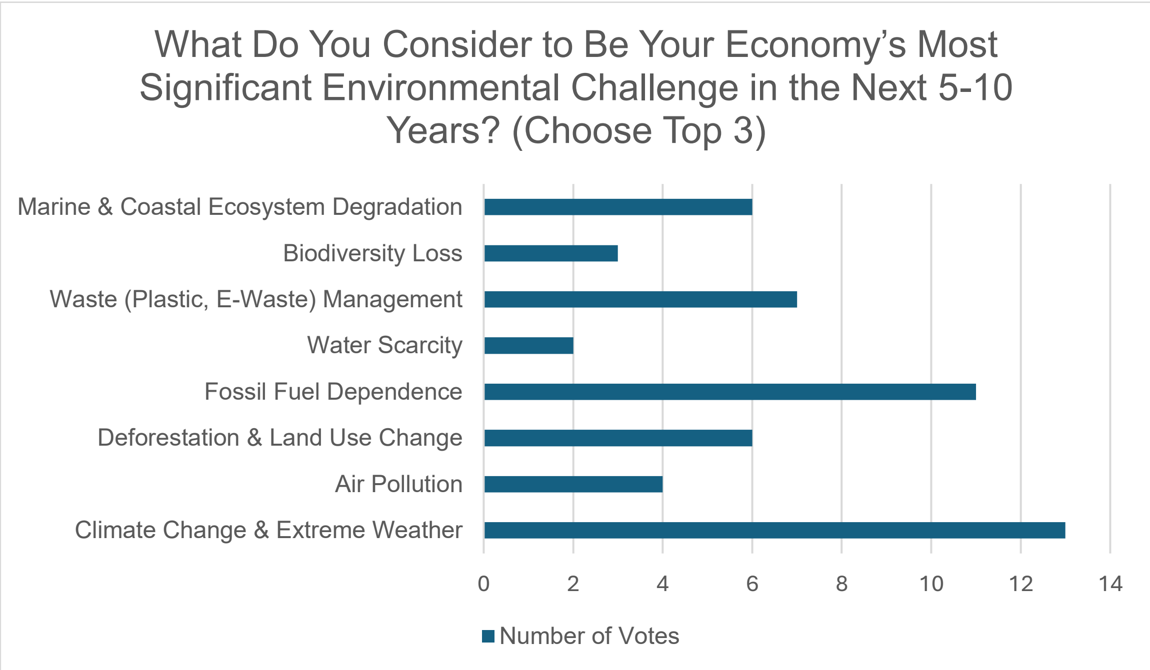

Figure 1: Results of an audience poll (19 participants) on the biggest environmental challenges to their economy.

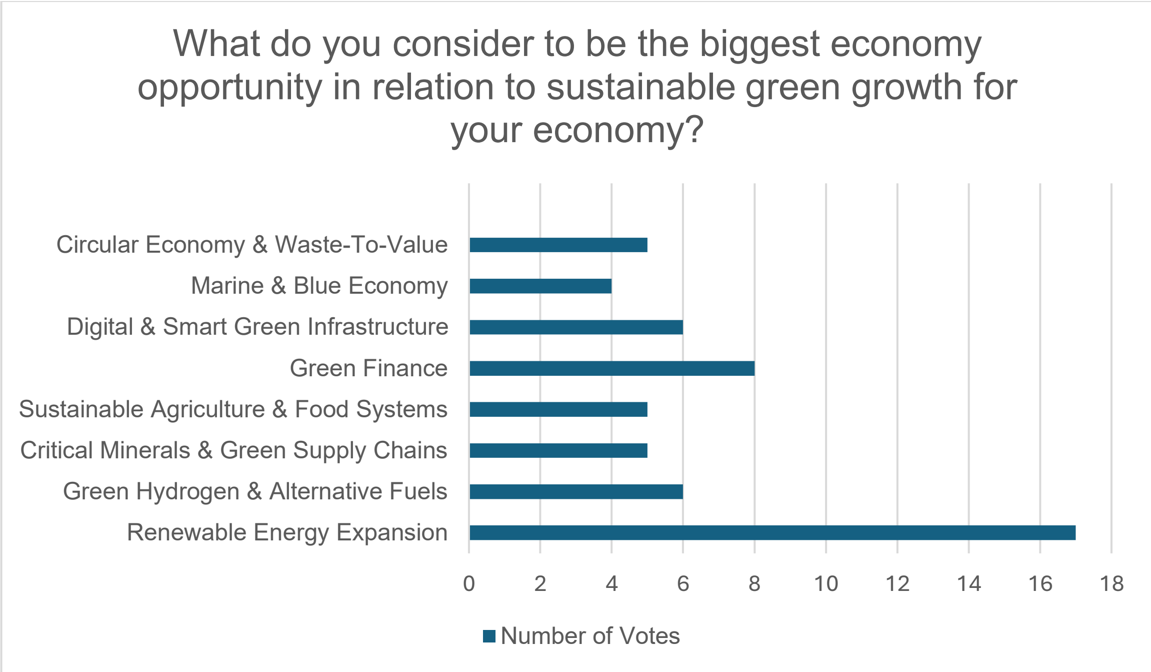

Figure 2: Results of an audience poll (20 participants) on the biggest economic opportunities offered by sustained economic growth.

2.3 Domestic efforts in APEC

Following the first set of presentations, APEC economies shared their domestic approaches to sustained economic growth, highlighting key policies, challenges, and enablers within their respective contexts.

2.3.1 Singapore's Green Plan 2030 and Regional Approach to Sustained Economic Growth

Delivered by Christopher Tan, Deputy Director, International Trade Cluster, Ministry of Trade and Industry (on behalf of MSE/PMO-NCCS) and Zachary Tan, Assistant Director, Ministry of Trade and Industry

The presentation included information about the Singapore Green Plan 2030[3], a comprehensive roadmap to advancing the economy's transition across 5 pillars: city in nature, sustainable living, energy reset, green economy, and resilient future.

The plan sets ambitious targets, including raising the carbon tax, phasing out internal combustion engine vehicles, and increasing solar energy deployment.

The session also examined Singapore's *Green Economy Agreements (GEAs)*, non-binding frameworks signed with partner economies to facilitate cooperation on green trade, standards harmonisation, and sustainability-linked business opportunities. These frameworks enable the economy to achieve growth and sustainability

[3] Government of Singapore, [Singapore Green Plan 2030] (launched February 10, 2021)

simultaneously, which is crucial for trade-focused economies such as Singapore[4]. The *Singapore-Australia Green Economy Agreement*[5] was cited as a practical example of this type of policy instrument in operation.

The presentation underscored that, given Singapore's limited land, and resources, enabling trade through GEAs allows the economy to tap into international trade and partnerships to catalyse sustained economic growth, accelerating the transition towards a sustainable and resilient economy.

2.3.2 Exploring the Nexus of Sustained Economic Growth and Trade: A Republic of Korea (ROK) Perspective

Delivered by Jukwan Lee, Director, National Centre for APEC Studies, Korea Institute for International Economic Policy

This presentation explored the nexus of sustained economic growth and trade in Korea. They discussed the economy's challenges of a "high risk lone march," referring to the difficulty of pursuing climate goals amid weakening global cooperation, rising climate pressures, and worsening trade landscape.

The Republic of Korea remains highly dependent on fossil fuel imports and has an economic structure that is heavily reliant on manufacturing and exports, making it particularly sensitive to global market shifts and green trade barriers.

To map the path forward for economies, a strategic matrix was presented, illustrating the nexus between sustained economic growth and trade (*Figure 3*) where the optimal outcome necessitates the convergence of two critical factors: strong domestic climate action and robust global collaboration.

	High Global Cooperation *Coordinated & Ambitious*	Low Global Cooperation *Fragmented & Retreating*
Fast Domestic Drive *Aggressive & Proactive*	Lead & Dominate • Shape global standards • Seize first-mover advantage • Liberalise green goods and services	Go At It Alone • Targeted industrial policy • Build resilient green supply chains • Seek niche alliances

[4] Ministry of Foreign Affairs, "Transcript of Minister for Foreign Affairs Dr Vivian Balakrishnan's Interview with *Financial Times* Singapore Correspondent Owen Walker, 7 April 2025", https://www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2025/04/20250411-Min-FT-Interview "And the unusual fact that our trade volume is more than three times our GDP (Gross Domestic Product)"
[5] Department of Foreign Affairs and Trade, *Singapore-Australia Green Economy Agreement* (Signed 18 October 2022)

Slow Domestic Drive *Cautious & Gradual*	Follow & Adapt • Align with global consensus • Minimise relative costs • Gradual, flexible transition	Defend & Delay • Prioritise energy security • Resist external pressure • Delay costly action

Figure 3: A strategic matrix for the nexus of sustained economic growth and trade, adapted from ROK's presentation.

2.3.3 Going Green and Digital: A Sustainable, Inclusive and Prosperous Future for All by The Republic of the Philippines

Delivered by Arnel C. Antonio, Senior Science Research Specialist, Department of Energy of the Philippines

The Republic of the Philippines introduced the *Philippine Energy Plan 2035-2050*[6] as the guiding framework for the economy's energy transition, balancing the core priorities of energy access, affordability, reliability, and sustainability. The plan articulates a strategy focused on expanding renewable energy (particularly solar, wind, and geothermal), creating green jobs in the energy sector, and securing new power supply agreements to ensure energy stability.

One key feature of the plan emphasises the early retirement of coal-fired power plants, recognising the need to phase-down reliance on coal while preparing the economy for cleaner alternatives.

The energy virtual one-stop-shop (EVOSS) mechanism was highlighted for its role in streamlining administrative processes for energy projects by consolidating all approvals, documentations, and payments into a consolidated platform. The platform digitalises workflows and creates a share repository of permits and certifications, thereby enhancing efficiency and transparency across the sector.

2.3.4 Future Made in Australia

Delivered by James Middleton, First Secretary (Economic), Australian High Commission Singapore

Australia presented the *Future Made in Australia* [7] initiative, which leverages Australia's natural resource endowments and reputation for science and technology to prioritise net-zero transformation, economic resilience, and security. The initiative deploys targeted government investments and fiscal support to encourage the significant private sector investment into priority industries such as renewable

[6] Department of Energy (The Philippines), *The Philippine Energy Plan 2035-2050* (2023)
[7] The Treasury, *Future Made in Australia* (passed 29 November 2024).

hydrogen, critical minerals processing, green metals, low-carbon liquid fuels, and clean energy manufacturing, including battery and solar panel supply chains.

Key enablers of the initiative highlighted were climate trade agreements such as the *Singapore-Australia Green Economy Agreement* [8], policies to attract foreign investment such as a new Investor Front Door, and stronger regional partnerships aimed at decarbonising both Australia and the broader APEC region.

2.3.5 Advancing Russia's Policies for Low-Carbon Development

Delivered by Irina Kozlova, Deputy Head of Division, Department of Multilateral Economic Cooperation and Special Projects, Ministry of Economic Development of the Russian Federation

The Russian Federation shared the implementation of its strategy of *Socio-Economic Development of The Russian Federation with Low Greenhouse Gas until 2050*[9] to support sustained economic growth while maintaining competitiveness during the energy transition. A key pillar of this strategy is the *Russian Climate Monitoring System*[10] which provides science-based climate data for citizens, policymakers, and businesses. Domestically, the *Sakhalin Climate Neutrality Initiative* introduces a regional carbon regulation framework, carbon trading and offset mechanism, and targeted investments in low-emission energy deployment.

At the global level, the Russian Federation established the *BRICS Contact Group on Climate Change and Sustainable Development* in 2024, leading to the adoption of the Framework for Cooperation on Climate Change and Sustainable Development and new platforms on carbon markets and climate research. The economy is also expanding bilateral climate partnerships with several economies including Azerbaijan; People's Republic of China; Ethiopia; India; Kyrgyzstan; and Oman.

Within APEC, the Russian Federation implemented the project *APEC Technological Solutions for Monitoring GHG Emissions* [11], which explores the use of satellite technologies to monitor emissions and support low-carbon development. The Russian Federation emphasised that satellite-derived information has the potential to significantly improve transparency, support compliance with emissions reduction targets, and enable more effective policymaking. By offering consistent, high-resolution, and cross-border data, space-based solutions were noted as an important tool for APEC economies seeking to strengthen their monitoring capabilities,

[8] *Ibid., note 5*

[9] UNFCCC, *Strategy of Socio-Economic Development of the Russian Federation with low greenhouse gas emissions until 2050*

[10] Ministry of Economic Development of the Russian Federation

[11] APEC, *Monitoring GHG Emissions in APEC: Space-Based Solutions*

particularly in sectors where ground-based measurement remains challenging such as in agriculture and energy.

2.3.6 Viet Nam's Path to Sustained Economic Growth: Commitments and Action Plans

Delivered by Pham Hoang Ha, Researcher, National Institute for Economics and Finance of Viet Nam

Viet Nam outlined the economy's challenge of meeting rapidly growing energy demand while transitioning to a low-carbon economy. Viet Nam's heavy reliance on coal and carbon-intensive industries creates economic challenges, particularly given the high costs of green transition and difficulties integrating sustainability into public financing. Domestically, many businesses and livelihoods remain dependent on carbon-intensive activities, creating social and economic trade-offs.

Viet Nam proposed several joint actions for APEC consideration, including expanding knowledge-sharing and capacity-building initiatives, harmonising green standards across the region, strengthening public–private partnerships to support green infrastructure development, and advancing broader regional climate initiatives. These efforts were positioned as essential to ensuring that APEC economies are able to transition collectively and equitably toward low-carbon and resilient growth.

2.4 Efforts in the private sector

This session showcased sustainability efforts from the private sector, drawing from the perspectives of large multinational corporations and emerging start-ups, illustrating the diverse challenges and opportunities businesses will face in advancing sustained economic growth together with their economies. Strong collaboration and public-private partnerships are cornerstones for achieving long-term sustained economic growth.

2.4.1 Striking a Balance between Environmental Stewardship, Social Equity and Economic Value Creation

Delivered by Ravin Trapshah Ismail, Global Lead, Sustainability Engagement, Wilmar International

Wilmar International—one of Asia's leading agribusiness groups and among the largest processors and traders of palm oil and related products—presented an overview of the challenges faced across the agrifood supply chain. The presentation underscored the complexity of managing global supply chains that span multiple jurisdictions with differing regulatory standards, alongside the need to ensure the inclusion of smallholders, manage human and labour rights challenges, validate sustainability-related data, and address the high cost of adopting advanced technologies.

The presentation highlighted opportunities for strengthening sustainability outcomes, including greater use of innovation and technology, deepening multistakeholder collaboration, and expanding public–private partnerships (PPPs) to better align the roles and expectations of producers, policymakers, and consumers. Wilmar emphasised the importance of engaging directly with local communities to identify context-specific challenges and strengthen pathways to certification and sustainable production.

Wilmar also proposed reframing the concept of “green premiums”—the price difference between sustainable products and conventional alternatives—as a shared cost mechanism rather than a burden borne solely by producers. The presentation suggested that policymakers and regulators could help alleviate these costs through supportive policies and market incentives, enabling more equitable transition pathways across the sector.

Wilmar made further observations that government-mandated sustainability certifications, while serving as a necessary trigger in greening the industry, can likewise burden small-scale enterprises which may lack resources for compliance, highlighting a need for targeted policies and market incentives, with a phased implementation of regulations to accommodate for varying levels of institutional capacity and financial readiness.

2.4.2 Presentation by Turtle Tree

Delivered by Jen Kiang, Head of Investor Relations, Turtle Tree

Turtle Tree, a Singapore-based food technology start-up developing cell-based dairy alternatives, shared the perspective of small, innovation-driven enterprises seeking to scale sustainable food solutions. The presentation outlined the structural challenges faced by early-stage green technology firms, including the difficulty of achieving cost-competitiveness, managing high technology and production costs, and meeting consumer expectations on price – particularly in markets where willingness to absorb a “green premium” remains limited.

The presentation underscored the importance of clear and consistent government signalling, both through policy direction and regulatory frameworks. Such clarity is essential for creating investor confidence, crowding in long-term capital, and supporting the early-stage financing needed for green start-ups to progress from innovation to commercial viability.

Turtle Tree also emphasised that start-ups must continue to build scalability, strengthen consumer adoption pathways, and ensure that sustainable alternatives can compete effectively with established products. Achieving this requires robust policy frameworks, supportive regulatory environments, and strong public-private collaboration to foster the growth of emerging green industries across APEC economies.

2.4.3 The Caterpillar Effect: What is it, how does it stop us from achieving our Net Zero goals and what can we do about it?

Delivered by David Mackerness, Director, Kaer

Kaer is a Singapore-based company specialising in Cooling as a Service (CaaS). As a service-based company, Kaer shared how service-based business models can accelerate sustainability outcomes for both private and public sectors. Using CaaS as an example, businesses pay for cooling on a subscription or pay-per-use basis while the provider handles system ownership, optimisation, and all operational responsibilities. This shifts cooling from a capital investment to a service, allowing users to access high-efficiency, low-carbon technologies without upfront costs while incentivising the provider to maximise energy efficiency.

The presentation stressed that such systemic, service-based models can help bring a wider group of actors into the green transition, mitigating what it referred to as the "caterpillar effect", where only a small group of frontrunners deliver progress while the majority lags behind. By making clean technologies more accessible, service models can democratise participation, reduce transition friction, and generate more uniform momentum across economies.

2.4.4 From architectural intent to intelligent system integration: Real-world insights into delivering high-impact, low-energy buildings through holistic environmental design strategies

Delivered by Praveen Hassan Chandrashekar, Director, Sustainability & Resilience Office, Surbana Jurong Consultants

The presentation by Surbana Jurong, a global infrastructure and managed services consultancy, highlighted how sustainability in the built environment can be advanced through a combination of passive and active design strategies.

Passive design strategies, such as optimising building orientation and utilising natural ventilation, were shown to reduce overall energy demand for cooling, lowering operational costs and greenhouse gas emissions across the built environment. Active strategies, including energy modelling, high-efficiency systems, and the integration of renewable energy, enable economies to identify the most cost-effective efficiency interventions, inform standards and incentive programs, and offset fossil-fuel consumption while stimulating local green technology markets.

2.4.5 DBS' path to net zero and supporting customers' transition towards lower-carbon business models through sustainable finance

Delivered by Huang Sipei, Senior Vice President, Institutional Banking Group, Sustainable Finance, DBS Bank Ltd

DBS Bank, one of Southeast Asia's largest banks, presented on its efforts to mobilise sustainable finance to support the green transition across its portfolio. Key initiatives include supply chain financing, the DBS Transition Finance Framework, the DBS ESG Ready Programme, and green bonds, all designed to help companies, particularly SMEs, adopt more sustainable practices. The DBS ESG Ready Programme, a public-private collaboration launched in partnership with Enterprise Singapore, offers a tiered approach to upskilling and training for SMEs, while green bonds leverage growing interest in the sustainable finance debt market to fund environmentally aligned projects.

The bank noted that financing SMEs remains a persistent challenge, given their limited capital and constrained credit profiles, which make individual projects difficult to finance. To address this, it suggested bundling smaller projects together to create scalable and more bankable opportunities. The presentation also emphasised the critical role of governments in supporting sustainable finance by levelling the playing field, reducing risks for financiers, and setting long-term pathways that encourage the adoption of green financing mechanisms across economies. These actions collectively can accelerate investment in low-carbon solutions and promote inclusive sustained economic growth within APEC economies.

2.4.6 Singtel SPEED: Empower businesses for a greener future – through Smart technologies, Purpose-driven innovations, Enhanced capabilities, achieving Effective DX

Delivered by Singtel, Marcus Tay, Director, Group Environmental Sustainability, Singtel

Singtel, Asia's leading communications technology group providing mobile, broadband, ICT, and digital services across multiple markets, highlighted the critical role of collaboration in achieving sustainability outcomes at scale. The company emphasised that working closely with industry peers, regulators, and customers is essential to accelerate progress on emissions reduction, digital inclusion, and green technology adoption. Singtel also noted the cross-cutting nature of achieving sustainable goals, whereby the speed and efficiency of digital infrastructure deployment can directly support economies in rapidly scaling sustainable solutions, enhancing both economic competitiveness and environmental impact.

2.5 Public-Private Partnership initiatives and experiences

This session examined how PPPs are being leveraged in Singapore to address market failures, accelerate decarbonisation, and build capacity for long-term sustainability. Presentations highlighted the value of collaboration between government, industry associations, and businesses in generating shared resources, strengthening skills development, and mobilising investment to scale climate solutions.

2.5.1 NetZeroHub and Singapore Emissions Factory Registry (SEFR)

Delivered by Hu Ching, Head of Net Zero Transition, Singapore Business Federation

The Singapore Business Federation, Singapore's apex business chamber that serves as a bridge between business and government, introduced the Singapore Emission Factors Registry (SEFR), developed through extensive public-private collaboration with government agencies and data partners. The SEFR addresses a key market failure: while emission factors are socially valuable public goods, they are often too costly for the private sector to produce independently.

As the first economy-level registry to list carbon footprints and the first accompanied by a dedicated resource portal offering thought leadership, training programmes, and case studies, the SEFR provides businesses with practical tools to measure and manage emissions. The registry plays a strategic role in facilitating the transition of businesses across scales by helping firms identify where greening efforts are most cost-effective across their operations. Since its conception, the registry has been actively used by both the private and public sectors to fill gaps in emissions reporting, strengthen compliance and enforcement, and improve access to reliable information for sustainability decision-making, thereby supporting more accurate and actionable climate outcomes.

SBF highlighted the importance of cross-economy collaboration within APEC to share methodologies, harmonise standards, and support regional adoption, enabling more consistent and scalable approaches to emissions accounting.

2.5.2 Presentation by Sembcorp Industries

Delivered by Valerie Lee, Head of Corporate Affairs & Sustainability, GRS and Singapore, Sembcorp

Sembcorp, a leading Singapore-based energy and urban development company with a growing portfolio in renewables and sustainable solutions across Asia, presented on its efforts to transition toward low-carbon and renewable energy sources both domestically and regionally. The company highlighted the role of public-private partnerships (PPPs) in creating long-term value and accelerating the green transition. Key initiatives include capacity-building and skills development, such as the SkillsFuture Queen Bee project, which upskills workers for the green energy sector, as well as R&D collaborations with Singapore Polytechnic and industry standards development with Enterprise Singapore, the National University of Singapore, and the Singapore Standards Council. Sembcorp also outlined the structuring of long-term power purchase agreements—for example, with the Banyan and Sakra Energy Storage Systems and SolarNova by HDB—which provide investment certainty for renewable energy projects.

2.6 Demonstrating sustained economic growth solutions in practice

One of the main goals of the workshop was to provide practical, firsthand exposure to sustained economic growth solutions in action. Participants undertook guided technical tours to Sembcorp Tengeh Floating Solar Farm and the Tuas Waste-to-Energy Incineration Plant. These site visits offered in-depth insight into the deployment and systemic integration of sustainability across the energy and waste management sectors in Singapore.

The 60 MWp floating solar farm on Tengeh Reservoir, commissioned in 2021, powers Singapore's water treatment plants with renewable energy, avoiding ~32,000 tCO_2 annually[12]; Sembcorp provides integrated sustainability solutions across renewable energy, urban utilities, and decarbonisation services.

Operational since 2009, the Tuas WTE plant processes ~800 t/day of waste and generates about 22 MW of electricity using proprietary incineration and flue gas treatment technology[13]; Keppel Seghers specialises in WTE, environmental engineering, and integrated waste and water management solutions.

12 Sembcorp, Our Solutions in Singapore
13 Keppel Infrastructure Trust, Environmental Services

3. Conclusion

"Exploring APEC's Path Towards Empowering Sustained Economic Growth" concluded with the attendees sharing their reflections on the workshop.

Attendees highlighted the importance of PPPs in enabling sustained economic growth, with wider collaboration across levels and sectors seen as a priority. Several participants mentioned the development of sustainable infrastructure, including in waste management and energy production. Additionally, the role of innovation, knowledge sharing, and technology transfer, as well as the diverse challenges and opportunities posed by the green transition, was recognised.

A summary of their reflections is as follows:

1. PPPs can fill capacity gaps in the market and support alignment between different actors in the economy.
2. Mobilising private finance is key to enabling industry growth in the private sector.
3. Knowledge-sharing can mitigate disparities in information and resources, therefore facilitating sustainability at scale.
4. Innovation and voluntary technology transfers, in tandem with workforce reskilling and upskilling, are vital to sustained economic growth for all.
5. Standards harmonisation promotes international collaboration, in the form of knowledge sharing, capacity building, and cross-border trade.

Over three days of presentations, discussions and site visits, the workshop explored the diverse pathways towards sustained economic growth. It identified the steps for complementing economic growth with sustainability, which can function as a catalyst for growth, opportunity, and value creation.

ANNEX A: Workshop Administrative Programme

Time	Event
Day 1 – 22 September 2025	
0900-0920	Registration
0920-0930	Opening remarks: 1) Welcome remarks by Alice McKenzie, APEC Economic Committee Programme Director 2) Welcome remarks by Christopher Tan, Deputy Director, Ministry of Trade and Industry
0930-1010	Overview of the Pre-Workshop Background Study by Junice Yeo, Managing Partner, Head of ESG Intelligence, Eco-Business
1010-1030	Coffee Break
1030-1100	Group Discussion Session 1: Identifying Domestic Sustainability Challenges
1100-1210	Domestic Sustainability Efforts in APEC Session 1: 1) Singapore's Green Plan 2030 and Regional Approach to Sustained Economic Growth by Christopher Tan, Deputy Director, Ministry of Trade and Industry (on behalf of MSE/PMO-NCCS) and Zachary Tan, Assistant Director, Ministry of Trade and Industry 2) Exploring the Nexus of Sustained Economic Growth and Trade: A Republic of Korea Perspective by Jukwan Lee, Director, National Centre for APEC Studies, Korea Institute for International Economic Policy 3) Going Green and Digital: A Sustainable, Inclusive and Prosperous Future for All by Arnel C. Antonio, Senior Science Research Specialist, Department of Energy of the Philippines
1210-1410	Lunch Break
1410-1520	Domestic Sustainability Efforts in APEC Session 2: 1) Future Made in Australia by James Middleton, First Secretary (Economic), Australian High Commission Singapore 2) Advancing Russia's Policies for Low-Carbon Development by Irina Kozlova, Deputy Head of Division, Department of Multilateral Economic Cooperation and Special Projects, Ministry of Economic Development of The Russian Federation 3) Viet Nam's Path to Sustained economic growth: Commitments and Action Plans by Pham Hoang Ha, Researcher, National Institute for Economics and Finance of Viet Nam
1520-1540	Coffee Break
1540-1640	Sustainability Efforts in the Private Sector 1) Striking a Balance between Environmental Stewardship, Social Equity and Economic Value Creation by Ravin

		1) ... Trapshah Ismail, Global Lead, Sustainability Engagement, Wilmar International 2) Presentation by Turtle Tree, Jen Kiang, Head of Investor Relations, Turtle Tree
1640-1700	Administration Briefing for Day 2 Site Visits	
Day 2 – 23 September 2025		
0900-1400	Site Visit: Sembcorp Tengeh Floating Solar Farm	
1400-1600	Site Visit: Tuas Waste-to-Energy Incineration Plant	
Day 3 – 24 September 2025		
0900-1000	Public-Private Partnership Initiatives and Experiences 1) Presentation by Sembcorp by Valerie Lee, Head of Corporate Affairs & Sustainability, GRS and Singapore, Sembcorp 2) Presentation by Singapore Business Federation by Hu Ching, Head of Net Zero Transition, Singapore Business Federation	
1000-1020	Coffee Break	
1200-1400	Sectoral Private Sustainability Efforts 1) The Caterpillar Effect: What is it, how does it stop us from achieving our Net Zero goals and what can we do about it? by David Mackerness, Director, Kaer 2) From architectural intent to intelligent system integration: Real-world insights into delivering high-impact, low-energy buildings through holistic environmental design strategies by Praveen Hassan Chandrashekar, Director, Sustainability & Resilience Office, Surbana Jurong Consultants 3) DBS' path to net zero and supporting customers' transition towards lower-carbon business models through sustainable finance by Huang Sipei, Senior Vice President, Institutional Banking Group, Sustainable Finance, DBS Bank Ltd	
1200-1400	Lunch Break	
1400-1425	Sectoral Private Sustainability Efforts 1) Singtel SPEED: Empower businesses for a greener future – through Smart technologies, Purpose-driven innovations, Enhanced capabilities, achieving Effective DX by Marcus Tay, Director, Group Environmental Sustainability, Singtel	
1425-1440	Blocked for Overflow	
1440-1520	Group Discussion 2: Practical Strategies and Key Insights	
1520-1540	Coffee Break	
1540-1640	Group Presentation Session: Key Insights	
1640-1700	Closing Session	